10/038,069 Page 3

PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

Uploading 10038069.str

STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

STR

$$G_2$$
 $G_3$ 
 $G_2$ 
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G1 CH2, CH, C, O

G2 C, N, CH

G3 C,O,N,CH2,CH

Structure attributes must be viewed using STN Express query preparation.

0 ANSWERS

10 ANSWERS

=> s l1

SAMPLE SEARCH INITIATED 09:40:45 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED -5307 TO ITERATE

18.8% PROCESSED 1000 ITERATIONS INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED) SEARCH TIME: 00.00.01

ONLINE \*\*COMPLETE\*\* FULL FILE PROJECTIONS:

> BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 101774 TO 110506 O TO

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0 SEA SSS SAM L1 L2

=> s l1 sss full

FULL SEARCH INITIATED 09:40:55 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 106038 TO ITERATE

100.0% PROCESSED 106038 ITERATIONS

SEARCH TIME: 00.00.04

10 SEA SSS FUL L1 L3

=> file caplus

Habte

3/10/2000

Page 4 10/038,069

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 148.15 148.36

FULL ESTIMATED COST

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FILE COVERS 1907 - 11 Mar 2003 VOL 138 ISS 11 FILE LAST UPDATED: 10 Mar 2003 (20030310/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13 3 L3 L4

=> d 1-3

ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS L4

2002:556140 CAPLUS AN

137:125159 DN

Preparation and antiviral activity of heterocyclic substituted TΙ 2-methylbenzimidazole antiviral agents

Yu, Kuo-Long; Civiello, Rita L.; Combrink, Keith D.; Gulgeze, Hatice IN Belgin; Sin, Ny; Wang, Xiangdong; Meanwell, Nicholas; Venables, Brian Lee; Zhang, Yi; Pearce, Bradley C.; Yin, Zhiwei; Thuring, Jan Willem

PA

U.S. Pat. Appl. Publ., 89 pp. SO CODEN: USXXCO

Patent DT

English LA

FAN.CNT 1																		
	PATENT NO.				KIND		DATE		APPLICATION NO.				o. :	DATE				
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	WO 2002062290			A:	A2 2002		0815		WO 2001-US45149				49	20011120				
	WO 2002062290			A.	A3 20021121													
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Habte 3/10/2000 10/038,069 Page 5

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BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRAI US 2000-257139P P
                           20001220
    MARPAT 137:125159
     ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS
L4
     2002:487553 CAPLUS
AN
DN
     Aryl or heteroaryl fused imidazoles as selective GABAA receptor ligands
TI
     Li, Guiying; Peterson, John M.; Albaugh, Pamela; Currie, Kevin S.; Cai,
IN
     Guolin; Gustavson, Linda M.; Lee, Kyungae; Hutchison, Alan; Singh, Vinod;
     Maynard, George D.; Yuan, Jun; Ling, Hong Xie; Ghosh, Manuka; Liu, Nian;
     Luke, George P.; Mitchell, Scott; Allen, Martin Patrick; Liras, Spiros
     Neurogen Corporation, USA; Pfizer Inc.
PA
     PCT Int. Appl., 309 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
T.A
FAN.CNT 1
                    KIND DATE
                                          APPLICATION NO. DATE
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                                          AU 2002-32768
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                           20001221
     WO 2001-US50038
                           20011221
                      W
     MARPAT 137:47200
os
     ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
L4
     1992:128783 CAPLUS
AN
DN
     116:128783
     Stable, 2-unsubstituted imidazole-3-oxides
TI
     Hossbach, Rosemarie; Lettau, H.; Nuhn, P.; Schneider, R.; Stenger, P.;
AU
     Stiebitz, Beate
     Sekt. Pharm., Martin-Luther-Univ. Halle-Wittenberg, Halle/Saale, O-4020,
CS
     Germany
     Pharmazie (1991), 46(6), 412-15
so
     CODEN: PHARAT; ISSN: 0031-7144
DT
     Journal
LA
     German
     CASREACT 116:128783
os
=> d ibib abs hitstr 1
     ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER:
                        2002:556140 CAPLUS
DOCUMENT NUMBER:
                         137:125159
TITLE:
                        Preparation and antiviral activity of heterocyclic
                        substituted 2-methylbenzimidazole antiviral agents
                        Yu, Kuo-Long; Civiello, Rita L.; Combrink, Keith D.;
INVENTOR(S):
```

Habte 3/10/200℃

Gulgeze, Hatice Belgin; Sin, Ny; Wang, Xiangdong; Meanwell, Nicholas; Venables, Brian Lee; Zhang, Yi; Pearce, Bradley C.; Yin, Zhiwei; Thuring, Jan Willem

PATENT ASSIGNEE(S):

SOURCE:

U.S. Pat. Appl. Publ., 89 pp.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

USA

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE -----\_\_\_\_\_ \_\_\_\_\_\_ 20020725 US 2001-994012 20011116 US 2002099208 **A1** 20020815 WO 2001-US45149 20011120 WO 2002062290 **A2** WO 2002062290 **A3** 20021121 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, W: CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,

BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2000-257139P P 20001220

PRIORITY APPLN. INFO.: MARPAT 137:125159 OTHER SOURCE(S):

GI

$$\mathbb{R}^4$$
 $\mathbb{R}^5$ 
 $\mathbb{R}^4$ 
 $\mathbb{R}^5$ 
 $\mathbb{R}^4$ 
 $\mathbb{R}^5$ 
 $\mathbb{R}^4$ 
 $\mathbb{R}^5$ 
 $\mathbb{R}^6$ 
 $\mathbb{R}^6$ 

The title compds. [I; R1 = (CRaRb)nX; Ra, Rb = independently H, C1-6 AB (un) substituted alkyl; X = H, C1-6 (un) substituted alkyl; n = 1-6; R2, R5 = independently H or halogen; R3, R4 = independently H, halogen, C1-6 (un) substituted alkyl; Q = heterocyclic group), useful in the treatment of viral infections, more particularly, for the treatment of respiratory syncytial virus infection, were prepd. E.g., a four-step synthesis of II, starting with 2-(chloromethyl)benzimidazole, was given. The antiviral activity of these compds. against respiratory syncytial virus (RSV) was detd. in HEp-2 (ATCC CCL 23) cells. The title compds. I, disclosed herein, show antiviral activity with EC50s between 50 .mu.M and 0.001 .mu.M.

## 443987-53-9P TT

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. and use of heterocyclic substituted 2-methyl-benzimidazole antiviral agents)

3/10/200**¢** Habte

RN 443987-53-9 CAPLUS

CN 1H-Imidazole-1-carboxylic acid, 3-[[1-(3-cyanopropyl)-1H-benzimidazol-2-yl]methyl]-2,3-dihydro-2-oxo-4-phenyl-, ethyl ester (9CI) (CA INDEX NAME)

IT 443986-62-7P 443987-54-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and use of heterocyclic substituted 2-methyl-benzimidazole antiviral agents)

RN 443986-62-7 CAPLUS

CN 1H-Benzimidazole-1-butanenitrile, 2-[(2,3-dihydro-2-oxo-5-phenyl-1H-imidazol-1-yl)methyl]- (9CI) (CA INDEX NAME)

RN 443987-54-0 CAPLUS

CN 1H-Benzimidazole-1-butanenitrile, 2-[[2,3-dihydro-2-oxo-5-phenyl-3-(phenylmethyl)-1H-imidazol-1-yl]methyl]- (9CI) (CA INDEX NAME)

=> d ibib abs hitstr 3

Habte 3/10/2000

10/038,069 Page 8

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS ACCESSION NUMBER: 1992:128783 CAPLUS

DOCUMENT NUMBER: 116:128783

TITLE: Stable, 2-unsubstituted imidazole-3-oxides

AUTHOR(S): Hossbach, Rosemarie; Lettau, H.; Nuhn, P.; Schneider,

R.; Stenger, P.; Stiebitz, Beate

CORPORATE SOURCE: Sekt. Pharm., Martin-Luther-Univ. Halle-Wittenberg,

Halle/Saale, O-4020, Germany Pharmazie (1991), 46(6), 412-15 CODEN: PHARAT; ISSN: 0031-7144

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 116:128783

GI

SOURCE:

Condensation reaction of .alpha.-diketone monoximes with HCHO in the presence of amino acids in H2O-EtOH gave 1-carboxyalkyl(aryl)imidazole oxides e.g. I. Cyclocondensation of 4-HO2CC6H4NHCOC(:NOH)COCH2 with primary amines in the presence of HCHO in H2O-EtOH also gave 63-89% 4-(4-carboxyphenylaminocarbonyl)-5-methylimidazole 3-oxides. Similarly reaction of 2-hydroxyimino-3-oxobutanoic acid anilides with HCHO and primary amines gave 55-98% 1-alkyl(aryl)-4-arylaminocarbonyl-5-methylimidazole 3-oxides. Benzimidazole 3-oxides and naphth[2,3-d]imidazole 3-oxides were also prepd. for 5-chloro-1,2-benzoquinone 2-oxime and 1,2-naphthoquinone 1-oxime resp. Cyclization of carboxylic group of prepd. compds. with 2-H2NC6H4NH2 in HCl gave 1-.alpha.-(benzimidazol-2-yl)ethyl-4,5-dimethylimidazole 3-oxides.

IT 139326-01-5P 139326-02-6P
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

RN 139326-01-5 CAPLUS

CN 1H-Benzimidazole, 2-[2-methyl-1-(4-methyl-3-oxido-5-phenyl-1H-imidazol-1-yl)propyl]- (9CI) (CA INDEX NAME)

RN 139326-02-6 CAPLUS

CN 1H-Benzimidazole, 2-[1-[5-(4-chlorophenyl)-4-methyl-3-oxido-1H-imidazol-1-yl]ethyl]- (9CI) (CA INDEX NAME)

Habte 3/10/20**℃** 

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=> log y COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION		
FULL ESTIMATED COST	14.18	162.54		
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION		
CA SUBSCRIBER PRICE	-1.30	-1.30		

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